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# Edinburgh's Entrepreneurial and Support Ecosystem

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## Executive Summary

- Entrepreneurial ecosystems are a new way of understanding how the knowledge, networks, and culture of a place support high-growth entrepreneurship.
- Entrepreneurship support programs are a key component of an effective entrepreneurial ecosystem by helping to inspire and train new entrepreneurs and providing resources like mentorship, financing, and networking that they could not otherwise obtain.
- Edinburgh has one of Europe's strongest entrepreneurial ecosystems, propelled by the number of 'unicorn' startups, world leading universities, highly skilled workers, and the availability of early stage investors and mentors.
- There are many support programs aimed at technology entrepreneurs in Edinburgh, more than 40 in total encompassing both publicly supported programs funded by Scottish Enterprise, university-led programs, and as well as private organizations and small, entrepreneur-led groups. These programs provide a variety of resources to entrepreneurs and help strengthen the existing entrepreneurial ecosystem.
- While there is duplication in the functions of different programs, the diversity of different programs allow individual organizations to specialize in particular niches and then refer clients on to other programs as their needs change. Though many programs informally refer their clients to different programs, more can be done to ensure that program leaders are aware of the different programs available so that entrepreneurs can be referred to other programs that are relevant to their needs.
- Some coordination in the ecosystem is necessary to ensure that programs do not conflict with one another, such as by holding events or competitions in too close proximity. At the same time however, a light touch is needed to ensure that programs are allowed to retain their individual distinctiveness and possess their own entrepreneurial drive to expand their offerings to new groups and areas.

## What are entrepreneurial ecosystems?

Entrepreneurial ecosystems are the economic and social environment of a region that support high-growth, innovative entrepreneurship. Entrepreneurs are not isolated business heroes: even the most independent minded entrepreneur draws on resources from their local community. These resources include things such as investment from angel investors and venture capitalists, but successful businesses also required skilled employees, early adopting customers, specialized support services like IP lawyers, mentors and advisors, and early-stage support like grants, business plan competitions, and incubators.

However, successful entrepreneurial ecosystems require more than resources. There must be a collective cultural that encourages innovation and risk-taking. There must be a community of entrepreneurs who help each other and learn from each others' experiences. Brad Feld's book *Startup Communities* lists 9 requirements of a successful entrepreneurial ecosystem, based on his experiences as an entrepreneur and investor in Denver, Colorado (see table).

Attribute	Description
Leadership	Strong group of entrepreneurs who are visible, accessible and committed to the region being a great place to start and grow a company
Intermediaries	Many well-respected mentors and advisors giving back across all stages, sectors, demographics, and geographies as well as a solid presence of effective, visible, well-integrated accelerators and incubators
Network density	Deep, well-connected community of start-ups and entrepreneurs along with engaged and visible investors, advisors, mentors and supporters. Optimally, these people and organizations cut across sectors, demographics, and culture engagement. Everyone must be willing to give back to his community
Government	Strong government support for and understanding of start-ups to economic growth. Additionally supportive policies should be in place covering economic development, tax, and investment vehicles.
Talent	Broad, deep talent pool for all level of employees in all sectors and areas of expertise. Universities are an excellent resource for start-up talent and should be well connected to community
Support services	Professional services (legal, accounting, real estate, insurance, consulting) are integrated, accessible, effective, and appropriately priced
Engagement	Large number of events for entrepreneurs and community to connect, with highly visible and authentic participants (e.g. meet-ups, pitch days, startup weekends, boot camps, hackatons, and competitions)
Companies	Large companies that are the anchor of a city should create specific departments and programs to encourage cooperation with high-growth start-ups
Capital	Strong, dense, and supportive community of VCs, angels, seed investors, and other forms of financing should be available, visible, and accessible across sectors, demographics, and geography.

## What is the role of the public sector in entrepreneurial ecosystems?

Entrepreneurial ecosystems differ from similar ideas like clusters in one key aspect: entrepreneurial ecosystems must be primarily organized and led by entrepreneurs themselves. The role of the state should be to stand back and let entrepreneurs identify areas of strengths that can be built upon and weaknesses that should be addressed. Feld and other business authors like Dan Isenberg (2010) make this point because they have observed that

entrepreneurs are better positioned than anyone else to know what types of resources and support are needed and have the ability and talent to quickly build organizations that can provide these types of support.

However, entrepreneurs can't do everything. It's unreasonable to expect that firm founders who are already working long hours at a startup should also be expected to run organizations to help train and support other entrepreneurs. Entrepreneurs do not necessarily have the capital or expertise to run effective training programs or to build the social and physical infrastructure that successful entrepreneurial ecosystems require. There is also the free rider problem: other entrepreneurs who do not contribute to the community still reap the rewards, which can discourage others from putting their limited time and resources to building a strong ecosystem (see Pitelis, 2012).

Given this, programs run by the public sector, third sector philanthropic organizations, and for-profit firms play an important role in helping to support strong entrepreneurial ecosystems. These programs help provide resources that are not otherwise available in the region, train new entrepreneurs in the basics of opportunity recognition and business management, and help growing firms connect with new customers, markets, and investors. Researchers from the Kauffman Foundation have identified two key categories of support these programs provide: broad and functional (Motoyama and Watkins, 2014).

#### Types of Entrepreneurial Support Activities

Support Type		Definition
<b>Broad</b>	Ecosystem Coordination	Creating community of entrepreneurial actors within a region; helping to bring together different parties to develop new programs and agendas
	People finding	Identifying relationships between entrepreneurs and important actors with unique skillsets and backgrounds (e.g. technologists, investors, customers)
	Networking	Providing venues and events for entrepreneurs to build their own social networks
	Financial advising	Providing general financial advice for entrepreneurs as they build their new ventures
	Inspiring	Disseminating stories of successful entrepreneurs to encourage entrepreneurs and help build a supportive entrepreneurial culture
<b>Functional</b>	Business model advising	Professional advising on firm business models
	Training	Entrepreneurial training (e.g. opportunity recognition)
	Business plan competitions	Awards (monetary or otherwise) for firms based on their business plan or business plan pitch
	Market research	Professional market research and due diligence to identify competitors and customers
	Space and incubation	Subsidized office space in an incubator or accelerator
	Awards	Any award, monetary or otherwise, for a firm that does not include a business plan component
	Direct financing	Investment or loans to a startup firm

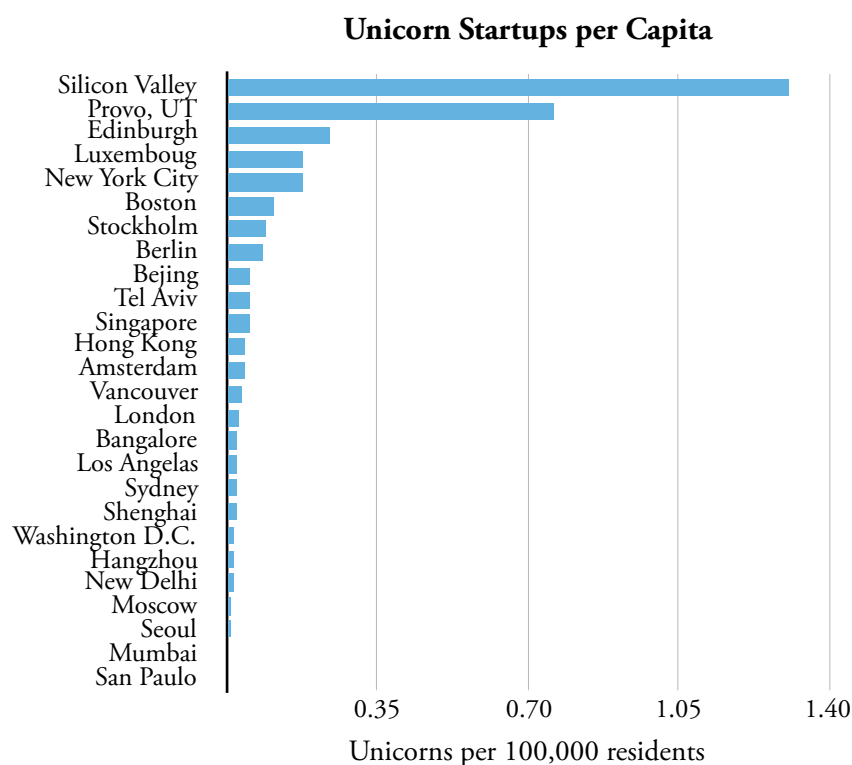
Source: Adapted from Motoyama and Watkins (2014)

Broad support help strengthen the overall ecosystem by helping to encourage entrepreneurship, creating opportunities for entrepreneurs to network and learn from each other, and brokering relationships between entrepreneurs and people they need to know such as investors and influencers. Functional support is direct training, advising, and financial investment in startups themselves. This includes training entrepreneurs in business management skills, giving advice on business plans, awards and competitions to help new ventures build legitimacy, and incubators and accelerators that give new startups a launchpad to grow.

In the past, most analysis of entrepreneurship support programs have concentrated on individual programs. However, an ecosystem perspective requires a broader approach to understand the role of support programs in thriving entrepreneurial ecosystems. Few if any programs provide support to entrepreneurs as all stages, from the creation of a new entrepreneurial idea to scale-up, growth, and exit. Rather, there is a multitude of different programs each providing specialized support services to a small proportion of different ventures, such as programs aimed at inspiring entrepreneurial outlooks in university students to programs aimed at helping quick growing startups with high turnover expand into international markets. These programs work in concert with each other, referring clients to new programs as they progress in their entrepreneurial journey. This requires a holistic view of the types of support provided by different entrepreneurship programs in order to ensure that all types of support required by entrepreneurs. However, at the same time this complicated landscape can make it difficult for entrepreneurs to identify the programs most relevant and important. In this environment it can also be difficult for support program directors to identify the specific needs of local entrepreneurs and create an environment in which entrepreneurs, rather than the state, leads the ecosystem.

## Edinburgh's entrepreneurial ecosystem

Edinburgh has one of the strongest entrepreneurial ecosystems in the United Kingdom. It has



two 'unicorns' startups valued at over 1 billion USD, world leading research universities and a strong investment environment. Indeed, on a per capita basis, Edinburgh has the third highest rate of unicorns in the world, behind Silicon Valley but ahead of places like London, New York, and Beijing.

This ecosystem did not develop overnight. Long-term investments in the research infrastructure at the University of Edinburgh, Napier University, and Harington-Watt University have contributed to a highly skilled labour force. A series of highly successful technology ventures in the 1970s and 1980s has helped

create a population of experienced entrepreneurs and angel investors with deep contacts

within the global technology community. Edinburgh's long history as a centre of financial and legal services has provided it with a deep pool of talented advisors who can help entrepreneurs navigate the complex legal and financial challenges of scaling up an innovative venture.

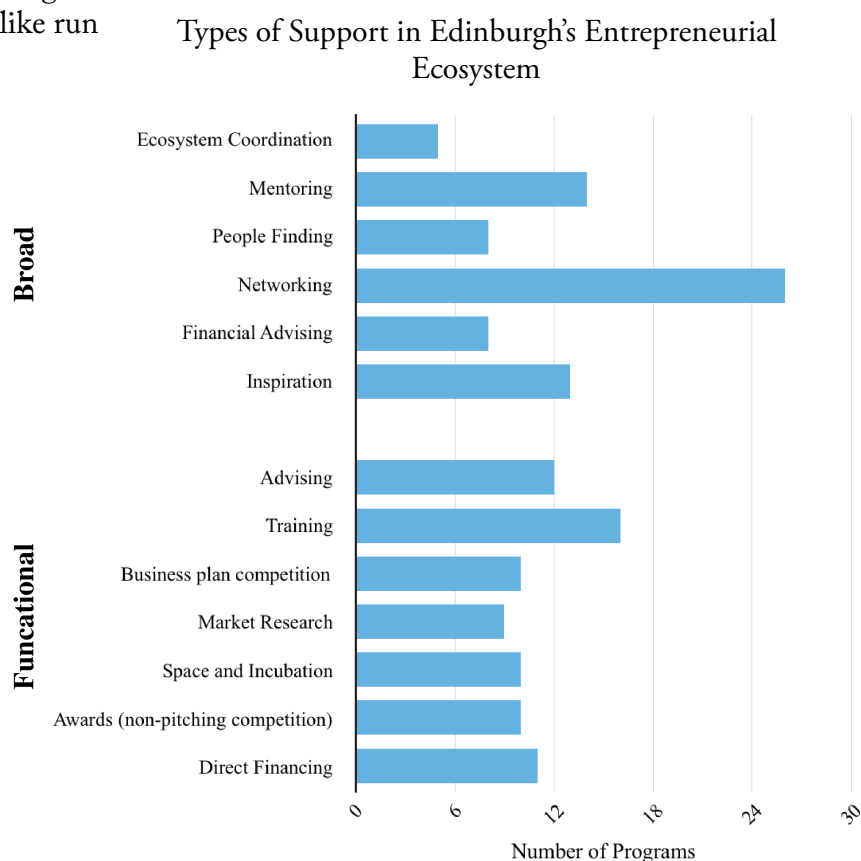
It is necessary to draw a distinction between *Edinburgh's* entrepreneurial ecosystem and *Scotland's* entrepreneurial ecosystem. Ecosystems are inherently based around city-regions rather than nations. Entrepreneurs tend to largely operate within their home region, where their social networks are most dense and where they can easily attend different programs and interact with other entrepreneurs and advisors. Beyond this, regions build up their own culture which influence entrepreneurs and a 'loyalty' to the region that inspires successful entrepreneurs to dedicate their time to improving the region's entrepreneurial community. Indeed, despite the fact that Edinburgh or Glasgow are less than an hour apart, they have vastly different business cultures and entrepreneurial histories. However, this doesn't mean that Scotland-wide programs don't affect entrepreneurs in Edinburgh's ecosystem. Many Scotland wide programs have offices or hold events in Edinburgh or otherwise support entrepreneurs in the city.

## Entrepreneurial Support Programs in Edinburgh's Ecosystem

In order to better understand the role of entrepreneurship support programs in Edinburgh's entrepreneurial ecosystem, I conducted a study of the different groups and organizations providing assistance and resources to technology entrepreneurs in Edinburgh. This processes involved two steps (1) identifying all the different programs that support entrepreneurs and evaluating the types of support they provide and (2) carrying out interviews with directors of selected programs to get a better sense of their perspective on Edinburgh's entrepreneurial ecosystem.

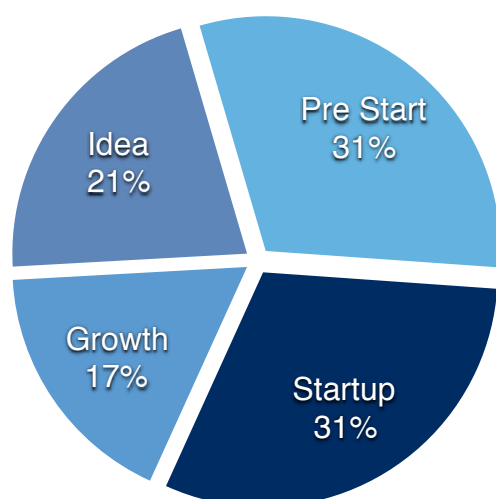
In total, 43 different programs were identified through different publications such as ScotlandCanDo's ecosystem report as well as monitoring social media sites to uncover under-publicized programs. The programs ranged from formal programs like run by Scottish Enterprise or the University of Edinburgh aimed at scale-up digital firms to small morning coffee meetups run by and for new entrepreneurs. The 43 programs identified is likely an undercount; this is a very fast changing environment where new programs are created and old ones cancelled on a continual basis. For example, during the time period of this study, Entrepreneurial Scotland merged with the Saltire Foundation and StartEDIN began its operations.

I analyzed the webpages and other materials published by these programs to identify their different



activities. As shown in the figure below, there is a strong mixture of different types of support activities and between broad and functional types of support. On average, each support organization provided 5.5 types of broad support and 1.8 forms of functional support. Networking were the most popular support activity, with 26 out of the 43 ESOs (60%) providing them. This is in part due to the low cost of putting on networking events compared with other types of entrepreneurial support activities. Training and mentoring were also popular support activities, with 37% and 32% of ESOs offering these services, respectfully. The least common activities were people finding, where the organization pro-actively connects the entrepreneur with advisors, investors, or other individuals who can help the venture grow, and financial advising. This is likely due to the extensive social capital and knowledge of the local entrepreneurial community necessary to identify the specific individuals an entrepreneur needs to know based on their unique context and to broker the creation of those relationships. This type of support may be difficult for many ESOs,

Stages of New Venture Support



especially large ones that need to deliver services for all of Scotland rather than just Edinburgh. However, this is possibly one of the most important support functions that quickly growing startups require.

I was further able to classify support programs based on the stage of a new venture's lifecycle they provide services for. Services can be supplied at the idea stage, where the entrepreneur has an idea for a new venture but it needs refining, the pre-start phase where they are developing a business model and plan, the startup phase at which the entrepreneur has founded a new venture and is in the process of developing and selling their product, and finally the growth phase where the firm is expanding its market. ESOs differ in their focus, with some concentrating their resources only on one stage, such as the idea or growth phase, with others covering multiple phases of

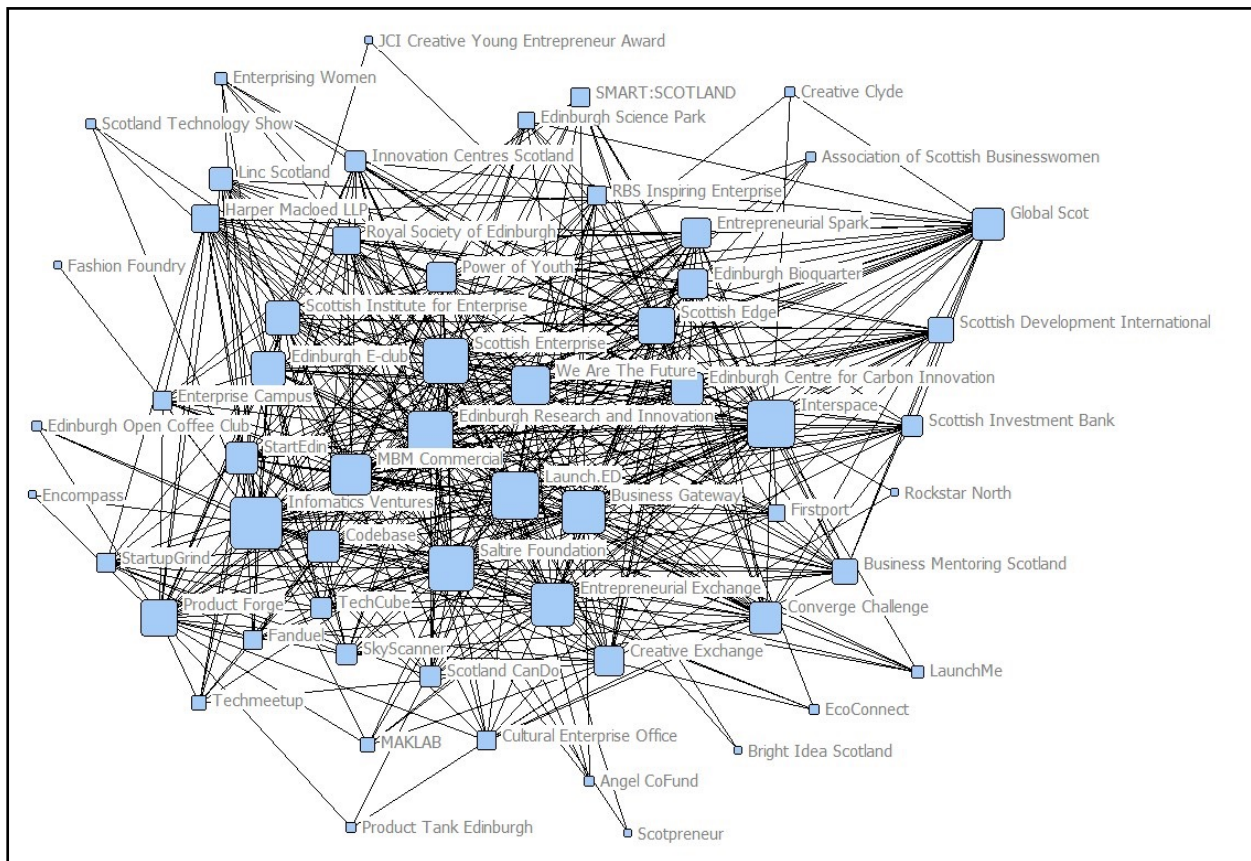
the entrepreneurship process. The results suggest an even distribution of ESOs with at least a partial focus on these stages. The majority of ESOs provided services for one or two stages; only two organizations had services for three or more phases. The lower number of programs for the growth phase of entrepreneurial ventures may be a concern given the growing realization about the importance of firms with high-growth potentials for economic development. However, firms at this stage need far more specialized support that is difficult for smaller or less focused ESOs to provide.

To learn more about the relationships between these programs I carried out interviews with a sample of the different support programs operating within Edinburgh. In total I spoke with directors or managers at 26 different programs. This included representatives of major Scottish Enterprise programs such as their High Growth Ventures program, incubators like the Creative Exchange, directors of business plan competitions, private companies that provide support for entrepreneurs like MBM commercial, as well as smaller, independent organizations like ProductForge that help train entrepreneurs. During these interviews I asked about what types of support they offer to entrepreneurs, what types of entrepreneurs they support, and their relationships with other programs and parts of the ecosystem. I also asked interviewees about other entrepreneurship support programs they've worked with in the past 12 months.

The data I collected shows a very thick network of support programs. As shown in the network diagram below, support programs have dense networks of connections. There are few



## Networks between entrepreneurship organizations



if any programs that are totally cut off from all other programs. On average, each program I spoke with is connected with 10.8 other programs. In total, the programs with the most links to other programs are Scottish Enterprise (23), Business Gateway (22), Informatics Ventures (22), and Launch.ED (21).

These close connections highlight an important point about the role of support programs in Edinburgh's — and Scotland's — entrepreneurial ecosystem. Programs throughout Scotland are able to refer their clients to other programs as their businesses grow and change. This allows individual programs to provide specialized support for different types of entrepreneurs — such as student entrepreneurs, academic entrepreneurs in the biotech sector, or social enterprises — while at the same time ensuring that they can access other types of support as their ventures grow and require a different sets of resources. In many cases, these connections were informally plotted out by program directors, such as SIE advisors who encourage participants to enter Scottish Edge competitions, who will then suggest winners consider entering Converge Challenge.

Other times these are formal and carefully laid out plans to create a roadmap for ventures that help them develop ideas and then enter different competitions to gain resources and connections. For instance, Informatics Ventures has set up their EIE program to attract ventures from local universities, incubators, and support programs. Their IV Tuesday sessions provide space for entrepreneurs to meet investors ahead of time and build connections within the ecosystem. They encourage their participants to enter other competitions throughout the year like Pitch@Palace are used to help entrepreneurs perfect their pitch before EIE.

## Conclusions and Recommendations

Edinburgh currently has one of the strongest entrepreneurial ecosystems in Europe. This ecosystem is powered by a large population of skilled entrepreneurs, workers, investors

and mentors; world leading universities; and a dense network of support programs that help to train entrepreneurs and help them access resources they would not otherwise be able to obtain. These programs provide support, training, and financing to individual entrepreneurs and help strengthen the overall ecosystem by helping build more networks and connect entrepreneurs with the people they need to know.

The profusion of support programs should be seen as a strength rather than a weakness. While there are certainly duplicated functions in the ecosystem (for example, more than 25 different groups host networking events), most programs are able to specialize in particular types of entrepreneurs depending on their industry, level of development, or other characteristics.

The number of different programs should be taken as an opportunity for different programs to specialize in providing services to a small, focused community of entrepreneurs with the knowledge that they can be referred to other programs as their needs change. By specializing, programs can provide more relevant resources and support for their clients, increasing their chances of survival and growth.

There will always be a need for large support programs such as Business Gateway and SIE that can provide broad advice and support to help train new entrepreneurs and help with the logistics of setting up a new business. However, these programs should proactively scan the larger ecosystem for follow-on programs that they can refer their clients to when they reach an appropriate stage. This should include smaller, entrepreneur-led groups such as local Tech Meetups that are often missed in Edinburgh's large entrepreneurial community.

At the same time, there should be more coordination within the ecosystem to ensure that everyone is aware of the wealth of resources available. For instance, there are many different business plan competitions throughout Edinburgh and Scotland for entrepreneurs of all levels, from small prizes for students or young entrepreneurs with ideas in the early stages of development to the £100,000 ScottishEdge prize. There have been multiple occasions when deadlines for two or more competitions were so close together that participants had to pick and choose which to enter and other deadlines. There are also large gaps in the competition calendar where winners of previous competitions can lose their forward momentum.

However, this coordination should be done with a light hand. While many programs are funded either directly or indirectly by the Scottish Funding Council or Scottish Enterprise, their independence is key to preserving their specialization and unique features. Beyond this, there are many private and social enterprise support programs within the ecosystem. New initiatives like ScotlandCanDO are a useful governance model that attempts to bring major support stakeholders together but more can be done to keep track of the different programs and events happening throughout Edinburgh and Scotland to ensure that everyone remains on the same page.

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